

MTC Regional Transit Hub Performance Review Project

Summary Report



**Wilbur Smith Associates
Harley & Associates**

April 10, 2007

MTC Regional Transit Hub Performance Review Project

SUMMARY OF FINDINGS

BACKGROUND

As a requirement of Regional Measure 2, MTC adopted a Transit Connectivity Plan in April 2006 and incorporated its findings and recommendations into MTC's Transit Coordination Implementation Plan pursuant to state statute.

The Connectivity Plan presented general findings and improvement strategies for hub-related improvements at the 21 regional transit hubs identified in the Plan. Issues for review included wayfinding signs, transit information displays, real-time displays, station amenities and last mile programs. Five hubs were selected as prototypical of the transit hubs found in the Bay Area; this subgroup (San Jose Diridon, El Cerrito del Norte BART, Dublin/Pleasanton BART, San Francisco Ferry Terminal/Embarcadero Station, and San Rafael Transit Center) served as the basis for recommendations and guidelines developed in the Plan. The complete Transit Connectivity Plan can be viewed on MTC's website at: www.mtc.ca.gov/planning/connectivity/.

Implementation of the Plan will be conducted in two phases. Phase 1 will focus on wayfinding signage and transit information. During market research conducted for the 2006 Connectivity Plan, these two components were found to be critical needs for transit connectivity. In fact, most transit riders, especially new or infrequent users, requested better directional signage to services at the hub and in the local area, as well as readily available current schedule information. To make these and other improvements, MTC is funding capital costs and a portion of the estimated annual replacement/maintenance costs with State Transit Assistance (STA) Regional Discretionary funds approved by the Commission. To be eligible for these funds, the transit hub owner and/or transit operators will be responsible for developing improvement plans and cost estimates to correct identified deficiencies and needs related to wayfinding and transit information.

Phase 2, focused on real-time information, will be funded separately and implemented jointly between MTC and the transit operators once MTC completes the system architecture.

To facilitate Phase 1 and Phase 2 improvements, hub performance reviews were conducted in fall 2006 at each of the 24 regional hubs. This included the 21 hubs originally identified in the Plan plus the three international airports as listed in Table 1. Napa Transit Center was under construction at the time of these initial reviews and consequently was not included in the current review effort. A hub task force comprised of partner transit agencies and other local jurisdictions was convened at each of the regional hubs to identify existing wayfinding signage, transit information, and real-time signage deficiencies and needs. A checklist, included in Appendix A, was used for the assessment.

The findings of the hub performance review have identified deficiencies and needed improvements to wayfinding signage, customer transit information, and real-time signage to enhance connectivity of the hub. This report presents the key issues from the hub review and discusses the 'next steps' for implementation. Findings by hub are summarized in Table 2. Specifics for each hub can be found in the individual task review reports in Appendix B.

SUMMARY OF FINDINGS

Table 1
Regional Transit Hubs

-
- | | |
|--|---|
| <ul style="list-style-type: none"> • Dublin/Pleasanton BART • Fremont BART • Oakland 12th Street BART • Coliseum Oakland Airport BART • Pleasant Hill BART • El Cerrito Del Norte BART • Richmond BART/Amtrak • San Rafael Transit Center • San Francisco Ferry Terminal/Embarcadero BART • Transbay Terminal/Montgomery BART • Civic Center • Caltrain Station 4th & King | <ul style="list-style-type: none"> • Millbrae BART • San Jose Diridon Station • Palo Alto Station • Great America Station • Mountain View Station • Vallejo Ferry Terminal • Santa Rosa Transit Center • Napa Intermodal • Fairfield Transportation Center • Oakland International Airport • San Francisco International Airport • San Jose International Airport |
|--|---|
-

KEY FINDINGS

While the San Francisco Bay Area has one of the best developed transit systems in the world, it is also one of the most complex involving more than 20 transit operators providing a variety of service types. Each agency has its own unique policies, procedures and operating practices best suited for their immediate service areas and not always appropriate for regional travel and transit connectivity.

The transit rider generally has one purpose in mind - getting from their starting point to their end point on transit with the greatest ease and convenience and at the lowest cost possible. The customer's ease of transferring from one transit system to another is "connectivity." Good connectivity will offer a multi-operator trip that is nearly as easy as a single operator trip; good connectivity can attract new transit riders — and retain existing riders.

One of the challenges for transit operators and the region, and the focus of the current phase of implementation of the Connectivity Plan, is to provide wayfinding and customer information at each regional hub that is consistent and meets the needs of the riders but flexible enough to be incorporated by transit operators into their daily operations. The variety of transit modes, hub sizes and architectural styles found within this region adds to the complexity of implementing a successful connectivity program. Consequently, it is important to find the commonalities between the hubs and provide the improvements that meet the needs of all riders whether they are riding a ferry, bus, train or combination of modes. In fact, it was found that most of the hubs have common characteristics both in the identified deficiencies and recommended corrective actions.

SUMMARY OF FINDINGS

Identified Deficiencies

Most of the deficiencies identified during the hub reviews were not unique to any particular hub but were found repeatedly throughout the system. This fact provides the opportunity to develop consistent measures that will improve connectivity between transit systems. (Specific deficiencies for each hub are included in Appendix B.) Deficiencies most frequently found include:

- There was a lack of consistency with the design of the signs and information displays used at the hub.
- Direction between the various services/operators at the hub was limited. Both signage and maps to provide that information were lacking or out-of-date.
- Existing directional signage was most in need of improvement including direction to other services, streets and key destinations. In particular, signage to connecting transit boarding areas – especially bus stops – was inadequate.
- Entry signs to the hub were often lacking or not visible enough. In addition, entry signs often did not include the station name or identification of services available (operator logos).
- Most hubs did not provide adequate comprehensive and up to date regional transit information.
- Customer information for the specific services at the hub was generally available although on occasion an operator was not represented. However, information displays were often difficult to find, hard to read, and out-dated. There was no consistency in the design, location of displays and/or the hierarchy of information that was presented.
- Maps showing the location of bus boarding areas and destinations in the vicinity were most often not included in the information displays or the information provided was out-of-date.
- Real-time information was not available at many of the hubs; signage that was available was limited to a single operator (as in the case of BART and Muni Metro platform signage), was not operational pending needed technology (Caltrain stations) or was provided for only a few routes (AC Transit real-time demonstration at El Cerrito del Norte).

SUMMARY OF FINDINGS

Corrective Measures

The following measures are recommended to correct the deficiencies listed above. (Specific corrective measures for each hub are included in Appendix B). There is opportunity in the application of these measures to design for and accommodate the architectural style of the individual hub. However, some level of consistency should be maintained between the hubs for some of these elements (such as RTICs) to ensure a level of product recognition by transit riders.

- Include operator logos and station names on station entry signs.
- Expand the use of operator logos on wayfinding signage for easy customer recognition. In addition, use international icons and symbols where appropriate, such as the information identifier ('i' or '?') at customer information displays.
- Install signs at all decision points in the hub, which direct passengers to entries and exits, information displays and between transit boarding areas.
- Use a consistent set of graphics, fonts, colors and arrow designs for directional signs.
- Provide RTIC displays at each hub including:
 1. The regional 511.org transit map;
 2. Subregional or system maps for local operators;
 3. Schedules and service hours;
 4. Fares and specific system information;
 5. Hub layout maps;
 6. Local vicinity maps; and
 7. Identification of 511 as a phone/web contact point for more detailed information.
- Real-time signage should be available for all service providers at the hub and should be placed in a central visible location. At a minimum, the following information should be included:
 1. Arrival/departure time;
 2. Service provider name or logo; and
 3. Route number and/or destination.

SUMMARY OF FINDINGS

NEXT STEPS

Action Plan for Developing Wayfinding Signage Improvement Plans

MTC is funding capital costs to make wayfinding information improvements. To be eligible for these funds, the transit hub owner and/or transit operators will be required to develop an Improvement Plan to correct identified deficiencies. The Improvement Plan should identify the specific improvements to be made and how much they will cost. As the first step in developing an Improvement Plan, hub operators must prepare an ‘Action Plan’. For some hubs, the required improvements are simple and involve coordination between few agencies. Other hubs are more complex both in needed improvements and agency participation. Because of this complexity, these hubs may require additional assessment before design and construction can proceed. It should be stressed that one action plan only should be developed for each hub; this will require cooperation and coordination between the participating agencies. A list of participating agencies for each hub is shown in Table 2 and includes each transit agency providing service at the hub as well as the local jurisdiction. It is recommended that MTC select a lead agency to coordinate this effort at each hub and that the responsibilities for each participant be clearly defined. Funding from MTC may be requested to develop the action plan particularly for those hubs that are more complex and will require extensive coordination, assessment or improvements. If necessary, MTC could consider hiring a consultant to create a plan for lead agencies with limited staff or expertise to complete the work. The Action Plan for wayfinding signage should include:

1. Identification by MTC of lead agency at each hub to coordinate the wayfinding signage improvements;
2. Identification of partner responsibilities for the tasks needed for implementation;
3. Description of how the Improvement Plans will be developed, i.e. use of internal staff or outside consultant, coordination with other agencies, etc.;
4. Description of related efforts currently underway or expected in the near future; and
5. Time frame for completion of the improvement plans.

Aside from wayfinding signage, there are other transit connectivity improvements that will receive regional funds such as regional transit information cases and real-time information displays. MTC and the transit agencies will develop an overall approach and schedule for addressing each of these improvements at a future date.

Implementation

Once the Wayfinding Signage Action Plan is completed and approved by MTC, implementation can proceed. The ‘readiness’ of each transit hub in terms of implementation is indicated in Table 2 (ratings are only to assess project readiness, and are not rankings on how implementation should proceed). Some hubs may require additional assessment to define needed improvements before design and preparation of PS&E documents can occur. These hubs were given a rating of ‘Medium’. In general, most BART stations are rated ‘Medium’. At other hubs, the needed improvements are more straightforward; it is expected that the development of the implementation documents can progress more quickly. These hubs are given a rating of ‘High’. Other hubs were also ranked as ‘High’ because they may be desirable as a demonstration project (as in the case of San Francisco Ferry Terminal/Embarcadero Station) or because of current development projects at the hub (as in the case of San Jose and Oakland Airports). Whichever ‘readiness’ rating is given to a hub, it is hoped that the lead agency will put every effort into moving the process forward.

MTC Regional Transit Hub Performance Review Project

SUMMARY OF FINDINGS

Transit operators can receive reimbursement for the cost of implementing the wayfinding signage recommendations in the Transit Connectivity Plan (\$7 million) through State Transit Assistance (STA) Regional Discretionary funds. These funds can be requested from MTC for (1) preparation of the action plan, (2) reassessment, design and PS&E documents, and (3) construction. MTC will provide additional guidance on reimbursement eligibility before transit agencies develop their Implementation Plans. Operators are encouraged to find additional funding sources or include some portion of these improvements as part of other projects.

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings

(Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
1. Dublin/Pleasanton BART	Significant bus and shuttle service is available for connection to BART, the Iron Horse Trail provides bicycle access, and there are approved development plans for residential, retail and parking development at the hub. BEST EXAMPLE: BART platform real-time transit and customer information signs. Provides audio and visual announcements (all BART station hubs).	<ul style="list-style-type: none"> WAYFINDING: New wayfinding program that links bus and shuttles to BART, enhances pedestrian and bicycle connections and the new development. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Three locations for an integrated and accurate real-time sign program. 	BART TBD	Medium; Include as part of station development plans. TBD	Amtrak Bus, BART, County Connection, Modesto Area Express/MAX, San Joaquin Regional Transit SMART, WHEELS, City of Dublin, City of Pleasanton
2. Fremont BART	New bus transit center separates buses from other pedestrian, bicycle and auto oriented traffic.	<ul style="list-style-type: none"> WAYFINDING: Needs comprehensive and integrated wayfinding and transit connection signs. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Two locations for an integrated and accurate real-time sign program. 	BART TBD	Medium TBD	AC Transit, BART, VTA, City of Fremont
3. Oakland 12th Street BART	New AC Transit bus improvements on Broadway and new developments in downtown Oakland.	<ul style="list-style-type: none"> WAYFINDING: Needs comprehensive and integrated wayfinding and transit connection signs. CUSTOMER INFORMATION: Clearer, centralized and better organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate next bus and BART real-time information at bus shelters and at central locations near future RTICs. 	BART TBD	Medium TBD	AC Transit, BART, City of Oakland

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings
 (Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
4. Coliseum Oakland Airport BART	This hub provides connection to Oakland Airport and Oakland Coliseum from the Bay Area via BART and Capitol Corridor. Future planned neighborhood and business improvements, Oakland Airport Connector and connections to Amtrak station.	<ul style="list-style-type: none"> WAYFINDING: Needs comprehensive and integrated wayfinding and transit connection signs. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate next bus and BART real-time information at key bus shelters and at central locations near future RTICs 	BART	Medium; include as part of station development plans. TBD	AC Transit, AirBART, BART, Capitol Corridor JPA, City of Oakland, Port of Oakland
5. Pleasant Hill BART	This hub is in a redevelopment area that has seen completion of significant residential and office commercial projects. Significant redesign of the hub and additional development is planned in the next five to ten years. Good bicycle and pedestrian access is available via the Iron Horse Trail.	<ul style="list-style-type: none"> WAYFINDING: New wayfinding program that links bus and to BART, enhances pedestrian and bicycle connections and the planned new developments. CUSTOMER INFORMATION: More organized and clearer local and regional (RTIC) customer information. REAL-TIME INFORMATION: Central pedestrian plaza location for an integrated and accurate real-time sign program. 	BART	Medium; Include as part of station development plans. TBD	BART, Benicia Transit, County Connection, Fairfield/Suisun Transit, WHEELS, County of Contra Costa
6. El Cerrito Del Norte BART	This hub functions as an end-of-line station with major regional bus connections.	<ul style="list-style-type: none"> WAYFINDING: Needs comprehensive and integrated wayfinding and transit connection signs. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate next bus and BART real-time information at key bus shelters and at central locations near future RTICs 	BART	Medium TBD	AC Transit, BART, Fairfield/Suisun Transit, GGT, Vallejo Transit, Westcat, City of El Cerrito

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings

(Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
7. Richmond BART/Amtrak	This hub provides the transfer station between BART and San Joaquin Amtrak trains and one of two transfer points between BART and Capitol Corridor service; new transit center is almost complete.	<p>WAYFINDING: Needs comprehensive and integrated wayfinding and transit connection signs.</p> <p>CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays.</p> <p>REAL-TIME INFORMATION: Integrate next bus and BART real-time information at key bus shelters and at central locations near future RTICs and in the new transit center.</p>	BART	Medium; include as part of current station development	AC Transit, BART, Capitol Corridor JPA, Caltrans Division of Rail, GGT, City of Richmond
8. San Rafael Transit Center	This hub functions as the primary transit center in Marin and other north coast counties. Includes county shuttle and regional airport transit services.	<p>WAYFINDING: Needs comprehensive and integrated wayfinding for transit connections and access to downtown activity centers.</p> <p>CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays.</p> <p>REAL-TIME INFORMATION: Integrate real-time information at a central location on each loading platform.</p>	Golden Gate Transit	High	GGT, Airport Express, Marin Airporter, Greyhound, County Shuttle, Sonoma County Transit, SMART, Marin County Transit District, City of San Rafael
9. San Francisco Ferry Terminal/ Embarcadero BART	Currently and historically this hub has functioned as one of the most significant transit hubs in the Bay Area. It integrates ferry, rail, bus and shuttle transit services.	<p>WAYFINDING: Needs comprehensive and integrated wayfinding for transit connections and access to downtown activity centers.</p> <p>CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays.</p> <p>REAL-TIME INFORMATION: Integrate real-time information at a central location in the Ferry Terminal and the Embarcadero Station.</p>	BART/Port of San Francisco	TBD	BART, GGT, Muni, Vallejo Transit, Alameda/Oakland Ferry, Harbor Bay Ferry, Tiburon Ferry, Amtrak Bus, WTA, Port of San Francisco, City/County of San Francisco

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings
 (Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
10. Transbay Terminal/ Montgomery BART	This hub is unique because of the proximity of the historical Transbay Terminal and existing Montgomery BART and MUNI rail station. Significant improvements to the Transbay Terminal are in the planning stages.	<p>WAYFINDING: Needs comprehensive and integrated wayfinding for transit connections and access to downtown activity centers.</p> <p>CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays.</p> <p>REAL-TIME INFORMATION: Integrate real-time information at a central location in the Transbay Terminal and the Montgomery Station.</p>	TJPA/ AC Transit/ BART	<p>Medium; include as part of station planning process.</p> <p>TBD</p> <p>TBD</p>	AC Transit, BART, GGT, Greyhound, Muni, SamTrans, Westcat, Transbay JPA, Caltrans, City/County of San Francisco
11. Civic Center	This hub is unique because of its proximity to federal, state and local government and activity centers. Integrates rail, bus, and new bicycle connections.	<p>WAYFINDING: Needs comprehensive and integrated wayfinding for transit and bicycle connections and access to downtown activity centers.</p> <p>CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays.</p> <p>REAL-TIME INFORMATION: Integrate real-time information at a location central to both BART and MUNI station agent booths.</p>	BART	<p>Medium</p> <p>TBD</p> <p>TBD</p>	AC Transit, BART, Muni, GGT, Samtrans, City/County of San Francisco
12. Caltrain Station 4th & King	This hub is the primary transit facility in the new SOMA/Mission Bay development areas of San Francisco. It integrates heavy and light rail, bus and bicycle transit services.	<p>WAYFINDING: Needs comprehensive and integrated wayfinding for transit and bicycle connections and access to SOMA and Mission Bay activity centers.</p> <p>CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays.</p> <p>REAL-TIME INFORMATION: Integrate real-time information at a central location in the Caltrain station.</p>	Caltrain	<p>High</p> <p>TBD</p> <p>TBD</p>	Caltrain, Muni, Amtrak Bus, City/County of San Francisco

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings
 (Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
13. Millbrae BART	This hub provides connection between Caltrain service to the South Bay and BART service to San Francisco and East Bay. Also served by considerable bus and shuttle services. BEST EXAMPLES: (1) Hub layout, hub vicinity and "you are here" maps; (2) Real-time bus information.	WAYFINDING: Needs comprehensive and integrated wayfinding and transit connection signs. CUSTOMER INFORMATION: Clearer and more organized presentation of local and regional customer information (and 'BEST EXAMPLE' maps) at centralized displays. REAL-TIME INFORMATION: Integrate existing SamTrans bus, rail and BART real-time sign information at central locations.	BART TBD TBD	Medium TBD TBD	BART, Caltrain, Samtrans, City of Millbrae
14. San Jose Diridon Station	This hub provides connection between heavy and light rail, bus and shuttle services. New residential development is under construction west of this hub.	WAYFINDING: Needs comprehensive and integrated wayfinding for transit and pedestrian connections. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate accurate real-time sign information at a central location on each platform and in the pedestrian tunnel.	Caltrain TBD TBD	Medium TBD TBD	ACE, Amtrak Bus, Caltrain, Capitol Corridor JPA, Caltrans Division of Rail, Monterey/Salinas Transit, Santa Cruz MTD, VTA
15. Palo Alto Station	Significant connecting services between Caltrain, bus and shuttle services. A new bus transit center was recently completed at this hub. New major accessibility improvements are planned for this hub. BEST EXAMPLE: bus transit center	WAYFINDING: Needs comprehensive and integrated wayfinding and transit connection signs. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate Caltrain, bus and shuttle real-time information at central locations near future RTICs and in the redesign plans for the hub.	Caltrain TBD TBD	Medium TBD TBD	AC Transit, Amtrak Bus, Caltrain, Samtrans, VTA, Union City Transit, City of Palo Alto

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings

(Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
16. Great America Station	Transfer station between ACE and Capitol Corridor trains and local commuter shuttles via color coding. BEST EXAMPLE: Color coding for shuttle connections	WAYFINDING: Needs comprehensive and integrated wayfinding and connecting signs for bus and light-rail. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate accurate real-time sign information for all service providers at a central location.	VTA TBD TBD	High TBD TBD	ACE, Capitol Corridor JPA, VTA, City of Santa Clara
17. Mountain View Station	Attractive new transit plaza adjacent to the downtown and a new VTA light rail station.	WAYFINDING: Needs comprehensive and integrated wayfinding for rail, bus and shuttle transit, bicycle connections and access to downtown activity centers. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate accurate real-time information for all service providers at VTA station, Caltrain station and a central location at the bus transit center.	Caltrain TBD TBD	Medium TBD TBD	Caltrain, VTA, City of Mountain View
18. Vallejo Ferry Terminal	Hub provides connection between ferry and bus services.	WAYFINDING: Needs comprehensive and integrated wayfinding for ferry and bus transit connections and access to downtown activity centers. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate real-time ferry and bus information at a central location in the passenger terminal.	Vallejo TBD TBD	High TBD TBD	Vallejo Transit, Benicia Transit, Napa VINE, City of Vallejo

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings

(Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
19. Santa Rosa Transit Center	This hub is the primary transit center for Mendocino and Sonoma Counties. It is conveniently located in downtown Santa Rosa near government and shopping centers.	WAYFINDING: Needs comprehensive and integrated wayfinding for bus transit, bicycle connections and access to downtown activity centers. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Integrate real-time bus information at one or two central locations in the transit center.	Santa Rosa TBD TBD	High; coordinate with other transit mall improvements TBD TBD	GGT, Mendocino Transit Authority, Santa Rosa CityBus, Sonoma County Transit, City of Santa Rosa
20. Napa Intermodal	Review not conducted - Facility under construction			N/A	Napa VINE, City of Napa
21. Fairfield Transportation Center	New transit center for Solano County which provides transfer between transit serving the Bay Area, Solano County and Sacramento. Functions as a bus transit center, park/ride lot and a carpool facility. Proposal to expand the facility is in the planning process. BEST EXAMPLE: Bus intermodal facility.	WAYFINDING: New wayfinding program that links bus services, enhances pedestrian and bicycle connections and carpool services. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: An integrated and accurate real-time sign program is planned for the bus transit center. Real-time signs should be installed near the transit store.	Fairfield TBD TBD	High TBD TBD	Fairfield-Suisun Transit, Rio Vista Transit, Vallejo Transit, City of Fairfield

MTC Regional Transit Hub Performance Review Project
SUMMARY OF FINDINGS

Table 2: Summary of Hub Review Findings
 (Note: Refer to individual hub reviews in Appendix B for comprehensive findings)

Hub	Positive Elements	Elements Needing Improvement/ Potential Action Plans	Recommended Lead Agency	Readiness	Participating Agencies
22. Oakland International Airport	Well-designed passenger facility recently been completed adjacent to Terminal 2, which clarifies connections to ground transportation. BEST EXAMPLE: wayfinding to ground transportation and real-time airline information signs.	WAYFINDING: Continue installation of a wayfinding sign program at Terminal 1 and 2 which provides connections to transit and other ground transportation. CUSTOMER INFORMATION: Clearer and more organized customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Use existing real-time airline information signs as a model to display transit information at Terminals 1 and 2.	Port of Oakland TBD	High; integrated with development plans at Terminals 1&2 TBD	AC Transit, AirBART, City of Oakland, Port of Oakland
23. San Francisco International Airport	Locating the BART station at SFO has provided a significant improvement for Bay Area regional transit services. BEST EXAMPLE: SFO uses a color coded print information system to assist passengers with identifying ground transportation options.	WAYFINDING: Expand the existing wayfinding sign program to make it easier to find BART and the SamTrans bus loading areas. CUSTOMER INFORMATION: More customer information for local and regional (RTIC) displays. REAL-TIME INFORMATION: Use existing real-time airline information signs as a model to display transit information at central locations throughout the airport.	City/County of San Francisco/ BART TBD	High TBD	BART, SamTrans, City/County of San Francisco
24. San Jose International Airport	This hub is currently undergoing an extensive reconstruction program. Access to local transit is provided on an interim basis. BEST EXAMPLE: excellent wayfinding sign program and real-time airline information.	WAYFINDING: Continue installation of a wayfinding sign program at Terminal A, B and C which provides connections to transit and other ground transportation. CUSTOMER INFORMATION: Continue to provide customer information for local and regional (RTIC) transit at existing information counters. REAL-TIME INFORMATION: Use existing real-time airline information sign technology as a model to display transit information at all terminals.	City of San Jose TBD	High, integrate with development plans for new terminals TBD	VTA, City of San Jose

APPENDIX A

Checklist for the Evaluation of Wayfinding Signage, Transit Information and Real-time Signage

MTC Regional Transit Hub Review

(THESE CHECKLISTS WILL BE COLLECTED AT THE END OF THE SURVEY, PLEASE WRITE CLEARLY)

Station Name: _____

Date: _____

Reviewer: _____

Agency: _____

Identification of station or transit operator		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	1. The hub is clearly identified, visible from surrounding roadways by vehicular and pedestrian traffic.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	2. Entrances into the hub are clearly identified, visible from approaches by vehicular and pedestrian traffic.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	3. Transit operators serving the hub are clearly identified at the entrances with their logo and name.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	4. Station identification reinforces information on printed maps and schedules.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	5. Station name is identified on the entrance sign along with agency logo.
Comments		

APPENDIX A

Checklist for the Evaluation of Wayfinding Signage, Transit Information and Real-time Signage

MTC Regional Transit Hub Review

(THESE CHECKLISTS WILL BE COLLECTED AT THE END OF THE SURVEY, PLEASE WRITE CLEARLY)

Moving around or entering or exiting the station		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	6. Agency logos are included with names on directional signs within the facility.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	7. Turnstile level street exit directional signs also include connection agency names and logs.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	8. Vital connections information is grouped together on signs.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	9. Connection directions are provided at each decision point and there are no gaps in the connection directional information flow.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	10. Exiting directional signs list a hierarchy of the popular destinations and connecting services to reach these destinations.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	11. Where connecting transit service is not within the station, clear directional signage (including walking distance) is provided to these services. All sign placement complies with 2004 ADAAG guidelines.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	12. In stations with multiple track/gate or train/ferry service, confirmation of agency, destination, and real-time departure is associated with those services.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	13. Clear sightlines are maintained to signs and all sign placement complies with 2004 ADAAG guidelines.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	14. Exiting connection information is color-coded to emphasize and make it easier to find directions and connections.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	15. Signs are legible with adequate message size appropriate for viewing distance, proper contrast ratios, and illumination levels.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	16. Arrows are of consistent design and are bold in visual balance with text and are closely associated with their messages.
Comments		

APPENDIX A

Checklist for the Evaluation of Wayfinding Signage, Transit Information and Real-time Signage

MTC Regional Transit Hub Review

(THESE CHECKLISTS WILL BE COLLECTED AT THE END OF THE SURVEY, PLEASE WRITE CLEARLY)

Identification of where to board or wait for transit		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	17. Transit boarding platforms are clearly and boldly identified.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	18. Where a particular transit route utilizes different boarding points for opposite directions of travel, directional signage is provided to the different boarding point including platform route number, name, and route terminus (a place name).
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	19. At commuter rail, ferry terminals or bus stations, the boarding area identification number is large and bold with service agency, destination, number, and "real-time" departure is provided.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	20. Schedule frequency and last departure information are provided at transit boarding platforms and are consistent with 2004 ADAAG guidelines.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	21. Bus stop signs have agency logos large and bold.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	22. Bus stop signs have accessibility and parking restrictions as auxiliary signs below the basic bus stop signs.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	23. Bus route identification on bus stop signs comply with 2004 ADAAG Guidelines - minimum 2" route number character height.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	24. Bus stop sign faces are visible from each approach direction.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	25. Bus shelters have associated bus stop signs which are consistent with the design guidelines described in this checklist.
Comments		

APPENDIX A

Checklist for the Evaluation of Wayfinding Signage, Transit Information and Real-time Signage

MTC Regional Transit Hub Review

(THESE CHECKLISTS WILL BE COLLECTED AT THE END OF THE SURVEY, PLEASE WRITE CLEARLY)

Transit Information for Pre-Trip and Enroute Planning

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	26. Transit information in Regional Transit Information Display Cases is accurate and easy to read.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	27. Transit operator and route maps for the nine-county San Francisco Bay Area are posted in the Regional Transit Information Display Cases.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	28. Hub specific information is provided in a case adjacent to the Regional Transit Information Display Case and at other critical locations at the hub.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	29. Hub layout maps are provided in the hub information display case.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	30. Map of hub vicinity with landmarks and attractions is posted in the hub information case.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	31. Posted transit information (i.e. maps, schedules) is well maintained, accurate and easy to find.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	32. Schedules, fare, transfer information and hub layout maps are located near bus stops and loading platforms.
Comments		
<input type="checkbox"/>	<input type="checkbox"/>	33. Printed schedules and maps distributed at the hub contain accurate information and are consistent with the information provided in the Regional Transit Information Display Cases.
Comments		

APPENDIX A

Checklist for the Evaluation of Wayfinding Signage, Transit Information and Real-time Signage

MTC Regional Transit Hub Review

(THESE CHECKLISTS WILL BE COLLECTED AT THE END OF THE SURVEY, PLEASE WRITE CLEARLY)

Existing Real-Time Signage		
Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	34. Real-time signage is provided at the hub.
Describe Real-time signage including		
35. Location of signs (indicate on station diagram).		
36. Description and photo of signage types.		
37. Identification of transit services included on real-time signage (Include operator and mode).		
Future Real-Time Signage Installations		
38. Describe location(s) for future real-time signage locations (indicate on station diagram). Refer to Appendix A Real-Time Technology Guidelines page A-24		
39. Describe transit services that would be included in real-time signage displays. Refer to Appendix A pages A-24-26.		

APPENDIX B

Hub Review Summary Reports

The Hub Review Summary Reports prepared for each of the regional hubs are provided here in the following order:

- Dublin/Pleasanton BART
- Fremont BART
- Oakland 12th Street BART
- Coliseum Oakland Airport BART
- Pleasant Hill BART
- El Cerrito Del Norte BART
- Richmond BART/Amtrak
- San Rafael Transit Center
- San Francisco Ferry Terminal/ Embarcadero BART
- Transbay Terminal/ Montgomery BART
- Civic Center
- Caltrain Station 4th & King
- Millbrae BART
- San Jose Diridon Station
- Palo Alto Station
- Great America Station
- Mountain View Station
- Vallejo Ferry Terminal
- Santa Rosa Transit Center
- Napa Intermodal (This hub was under construction at the time of this review)
- Fairfield Transportation Center
- Oakland International Airport
- San Francisco International Airport
- San Jose International Airport